

Remarks

The invention is directed at a low temperature rendering process for converting animal trimmings to meat product. The low temperature rendering process includes steps of:

- (a) surface treating animal trimmings in a bath with a heat transfer fluid provided at a temperature between about 80°C and about 150°C for between about 25 seconds and about 150 seconds to provide surface treated animal trimmings;
- (b) heating the surface treated animal trimmings in a heat exchanger having a first in and first out arrangement to a temperature in the range of about 30°C to about 50°C to form a heated slurry; and
- (c) separating the heated slurry into a solids stream and a liquids stream wherein the solids stream contains an increased weight percent of protein compared with the weight percent of protein in the heated slurry, and the liquids stream contains an increased weight percent of tallow and water soluble proteins compared with the weight percent of tallow and water soluble proteins in the heated slurry.

The low temperature rendering process can include additional steps. For example, the liquids stream can be separated into a heavy phase and a light phase. The heavy phase can include an increased weight percent of moisture compared to the weight percent of moisture in the liquids stream, and the light phase can include an increased weight percent of tallow compared with the weight percent of tallow in the liquids stream. In addition, the low temperature rendering process can include a step of combining the solids stream and the heavy phase to provide a meat product.

Obviousness -Type Double Patenting Rejections

The outstanding Office Action includes three rejections based on the doctrine of obviousness-type double patenting. Claims 16-20 stand rejected under the doctrine of obviousness-type double patenting over claims 1-26 of U.S. Patent No. 5,725,897 in view of *Phebus et al.* (Journal of Food Protection, Vol. 60, No. 5, 1997, Pages 476-484). Claims 16-20 stand rejected under the doctrine of obviousness-type double patenting over claims 1-13 of U.S. Patent No. 5,965,184 in view of *Phebus et al.* Claims 16-20 stand rejected under the doctrine of obviousness-type double patenting over claims 1-3, 11, and 13 of U.S. Patent No. 6,159,515.

The rejection under the doctrine of obviousness-type double patenting over the claims of U.S. Patent No. 5,725,897 in view of *Phebus et al.* and U.S. Patent No. 5,965,184 in view of *Phebus et al.* are traversed because it is not understood how claims of a patent can be combined with a publication to achieve a rejection under the doctrine of obviousness-type double patenting. Sufficient reasons and/or explanation as to why one would modify the claims of a patent in view of an article have not been presented. Nevertheless, rather than arguing the appropriateness of the three obviousness-type double patenting rejections, enclosed is a document entitled "Combined Terminal Disclaimer and Certificate Under 37 C.F.R. §3.73(b)" that renders the obviousness-type double patenting rejections moot. Accordingly, withdrawal of the obviousness-type double patenting rejections is requested.

Double Patenting Rejections

Claims 18-20 stand rejected under 35 U.S.C. §101 in view of claims 15, 16, and 18 of U.S. Patent No. 6,159,515. In view of the above amendment to claims 16 and 17, it is submitted that claims 18-20 are different from claims 15, 16, and 18 of U.S. Patent No. 6,159,515. Accordingly, withdrawal of the rejection under 35 U.S.C. §101 is requested.

Prior Art-Based Rejections

Claims 16, 19, and 20 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,382,444 (*Roehrig et al.*) and *Phebus et al.* This rejection is traversed.

Roehrig et al. describe a process for processing raw meat into reduced fat meat. According to *Roehrig et al.*, trimmings from meat processing operations are reduced in size to comminuted particle sizes (see column 4, lines 24-39), heated to a temperature of between about 100°F to about 115°F (column 5, lines 21-42), and centrifuged (column 6, lines 20-49). It is submitted that *Roehrig et al.* fail to describe a step of "surface treating animal trimmings in a bath with a heat transfer fluid provided at a temperature of between about 80°C and about 150°C for between about 25 seconds and about 150 seconds to provide surface treated animal trimmings" according to step (a) of claim 16.

It is submitted that one having ordinary skill in the art would not have received a suggestion from *Phebus et al.* to modify the process of *Roehrig et al.* to include a step of surface treating according to the presently claimed invention. *Phebus et al.* are directed at evaluating the

effectiveness of a steam pasteurization process in reducing pathogenic bacterial populations on surfaces of freshly slaughtered beef compared with other standard commercial methods. See the abstract of *Phebus et al.* It is submitted that there is no disclosure or suggestion by *Phebus et al.* of "surface treating animal trimmings in a bath with a heat transfer fluid provided at a temperature of between about 80°C and about 150°C for between about 25 second and 150 seconds to provide surface treated animal trimmings" according to the presently claimed invention.

The outstanding Office Action states, on page 2, that:

"It would have been obvious to surface treat the meat trimmings with a fluid at 80°C to reduce pathogens on the surface thereof since it is conventional to surface treat meat with steam or hot water at 80°C for pasteurization purposes before further processing, as evidenced by *Phebus et al.*"

The Office Action fails to identify where *Phebus et al.* provide this teaching. It appears that the Office Action may be referring to *Phebus et al.* at the paragraph bridging pages 476 and 477. This portion of *Phebus et al.* refers to articles disclosing cold and hot water washes for decontamination treatments, hot or cold water sprays to frozen and thawed beef tissue, cold or ambient-temperature washes, hot water to treat freshly slaughtered carcasses either before or after the final carcass wash, and a hot water/steam mixture spray onto freshly slaughtered beef carcasses. This portion of *Phebus et al.* fails to disclose or suggest "surface treating animal trimmings in a bath with a heat transfer fluid provided at a temperature between about 80°C and about 150°C for between about 25 seconds and about 150 seconds to provide surface treated animal trimmings" according to step (a) of claim 16.

In view of the failure by *Phebus et al.* to describe a step of surface treating animal trimmings in a bath with a heat transfer fluid provided at a temperature between about 80°C and about 150°C for between about 25 seconds and about 150 seconds to provide surface treated animal trimmings according to the presently claimed invention, one having ordinary skill in the art would not have received the suggestion to modify *Roehrig et al.* to achieve the presently claimed invention. Accordingly, the presently claimed invention would not have been obvious from *Roehrig et al.* and *Phebus et al.*, and withdrawal of the prior art-based rejection over *Roehrig et al.* and *Phebus et al.* is requested.

Claims 16, 17, 19, and 20 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 3,352,841 (*Lyon*), *Roehrig et al.*, U.S. Patent No. 5,552,173 (*Singh et al.*), and *Phebus et al.*

Lyon and *Singh et al.* fail to cure the defects identified above with respect to *Roehrig et al.* and *Phebus et al.* That is, *Lyon* and *Singh et al.* fail to suggest modifying *Roehrig et al.* to provide a low temperature rendering process that includes a step of surface treating animal trimmings in a bath with a heat transfer fluid provided at a temperature between about 80°C and about 150°C for between about 25 seconds and about 150 seconds according to the presently claimed invention.

Lyon describes a process of treating animal and poultry material containing fats to separate and recover the fats and solids. As described by *Lyon*, the flow of raw, uncommunited offal is heated to a temperature of about 150°F to 160°F (column 3, lines 37-40), and reheated to a temperature of 180°F to 200°F (column 5, lines 1-3).

Singh et al. are directed at a method for defatting meat utilizing a centrifuge. See *Singh et al.* at column 3, lines 20-34. teach the use of a centrifuge bowl 1 to facilitate removal of fat from the meat phase 9. *Singh et al.* are concerned with the removal of the boundary layer 11 provided between the fat layer 13 and the meat layer 9. By introducing water through the inlet 7, a fluid pressure is provided causing a mixture of the fat layer 13 and the boundary layer 11. See *Singh et al.* at column 9, lines 34-44.

Clearly, *Lyon* and *Singh et al.* would not have suggested modifying *Roehrig et al.* to include a step of surface treating animal trimmings in a bath with a heat transfer fluid provided at a temperature between about 80°C and about 150°C for between about 25 seconds and about 150 seconds to provide surface treated animal trimmings according to the presently claimed invention.

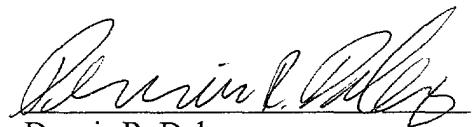
In view of the above comments, withdrawal of the prior art-based rejections is requested.

It is believed that this application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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